

### **REMARKS**

After entry of this Amendment, claims 13-18 and 24-30 are pending. Claims 28-30 are new. Claims 13, 18 and 28 are independent.

Reconsideration of this application is respectfully requested in view of the above amendments and the following remarks.

#### **Objection to the Drawings**

In response to the objection to the drawings, the Applicant respectfully submits herewith new drawings.

#### **Rejections of Claims 13-18 and 25-27**

Claims 13-18 and 27 stand rejected under 35 U.S.C. § 102, and claims 25-26 stand rejected under 35 U.S.C. § 103, with the Office Action relying on U.S. Patent No. 2,901,112 to Naftulin, U.S. Patent No. 3,965,896 to Swank, and U.S. Patent No. 3,592,245 to Schneller. The Applicant respectfully requests reconsideration of those rejections in view of the following remarks.

#### **Applicant's Invention and Example Embodiments**

Applicant's invention is directed to a device for modifying a fluid moving through a vessel prior to the ejection of the fluid from the vessel into the body of a patient. An example of an embodiment within the scope of at least the independent claims is illustrated in Applicant's Figure 1, reproduced below:

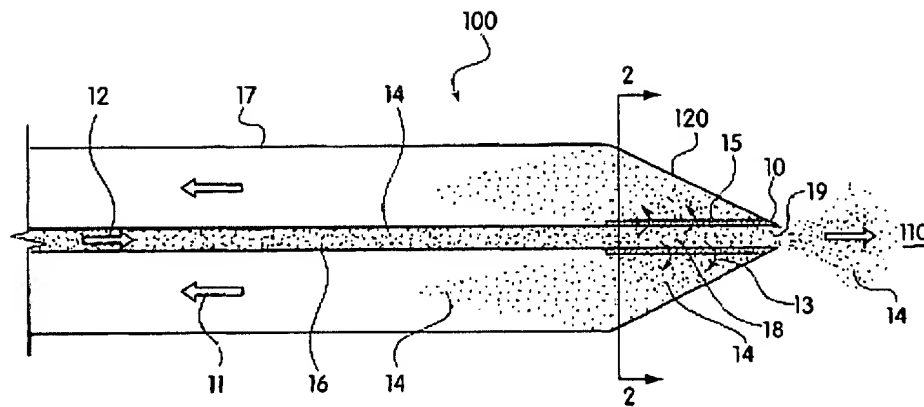


FIG. 1

In this embodiment, the vessel is a catheter 100 comprising a first lumen 16, a second lumen 17, and an exit orifice 19 located at a distal end of the first lumen. A mixing or modification chamber 18 is positioned within the first lumen 16 proximal to the exit orifice 19. The arrows 13 show the flow of compounds through a selectively permeable membrane 15 in a passageway located proximal to the exit orifice 19, the passageway being positioned between the chamber 18 and the second lumen 17. The passageway fluidly connects the chamber 18 to the second lumen 17, and the selectively permeable membrane 15 is positioned to selectively pass compounds through the passageway between the chamber 18 and the second lumen 17.

As an example of a use of this embodiment, fluid including a therapeutic agent and a solvent may be transported through the first lumen 16 from a proximal end of the catheter 100 to a distal end of the catheter 100. Before reaching the exit orifice 19, the fluid passes into the fluid mixing or modification chamber 18 located within the first lumen 16. Because the solvent of the fluid is able to pass through the selectively permeable membrane 15, solvent is drawn away from the fluid in the chamber 18 and into the second lumen 17. Thus, the amount of solvent in the

fluid is lowered prior to delivery of the fluid through the exit orifice 19 to the patient. While this example involves extraction of a compound from the fluid while the fluid is in the fluid modification chamber, the device may also be used for addition of a compound to the fluid while the fluid is in the fluid modification chamber.

### **The Cited References**

The Applicant respectfully submits that Applicant's invention is neither anticipated nor rendered obvious by the cited references.

The Naftulin '112 patent is directed to a combining tube for combining or mixing fluids in which two or more fluids are combined together in a mixture and then filtered. As the Naftulin '112 patent states, the fluid is "filtered after admixture." (col. 1, line 29 (emphasis added)). The fluids are combined in combining tube A, thereafter together passed through filter 10, and then discharged out of discharge or dispensing tube B. This device is completely different from Applicant's invention.

In the Office Action, the rejection states that the Naftulin '112 patent discloses a "first lumen (A)," a "second lumen (B)," "mixing chamber (10)," a "passageway (interior of 10)," and a "permeable membrane (filter 10)." Applicant's claims, however, recite "a passageway . . . positioned between the mixing chamber and the second lumen and fluidly connecting the mixing chamber to the second lumen, the passageway containing a selectively permeable membrane positioned to selectively pass compounds through the passageway" (claims 13 and 18) and "a selectively permeable membrane located in the passageway between the fluid modification chamber and the second lumen, wherein the selectively permeable membrane is positioned to selectively pass compounds through the passageway between the fluid modification chamber and

the second lumen” (claim 28). The portion of the Naftulin ’112 patent that the Office Action designates as the membrane (filter 10) is not positioned between the portions that the Office Action designates as the chamber (10) and second lumen (B), and there is no suggestion of an arrangement as recited in Applicant’s claims.

The Swank ’896 patent is directed to a blood autotransfusion apparatus. Blood 12 is drawn through tube 46, then through filter 48, and out of tube 24 where it is collected in reservoir 18. An anticoagulant solution from reservoir 22 is passed through tube 26, through port 52 into chamber 42, then through valve 62, through tube 56 and out ports 64, where the anticoagulant solution combines with the blood. (col. 5, lines 12-37; col. 6, lines 41-45). Thus, the anticoagulant solution mixes with the blood in tube 46, prior to entering the filter 48.

In the Office Action, the rejection states that the Swank ’896 patent discloses a “first lumen (26),” a “second lumen (24),” a “mixing chamber (40),” a “passageway (at 44)” and a “permeable membrane (resin filter 40).” However, as mentioned above, Applicant’s claims recite “a passageway . . . positioned between the mixing chamber and the second lumen and fluidly connecting the mixing chamber to the second lumen, the passageway containing a selectively permeable membrane positioned to selectively pass compounds through the passageway” (claims 13 and 18) and “a selectively permeable membrane located in the passageway between the fluid modification chamber and the second lumen, wherein the selectively permeable membrane is positioned to selectively pass compounds through the passageway between the fluid modification chamber and the second lumen” (claim 28). The portion of the Swank ’896 patent that the Office Action designates as the membrane (resin filter 40) is not positioned between the portions that the Office Action designates as the chamber (40)

and second lumen (24), and there is no suggestion of an arrangement as recited in Applicant's claims.

The Schneller '245 patent is directed to a dispensing device for intravenous medications. A dispensing package 10 has a reservoir 12, filter 16, cap 14 and piercing device 42. The fluid is dispensed into a container 54, 58.

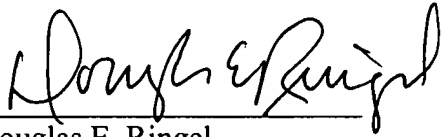
The Office Action states that the Schneller '245 patent discloses a "first lumen (inside 10)," a "second lumen (inside 58)," a "mixing chamber (42)," a "passageway (42)," and a "permeable membrane (16)." Contrary to Applicant's claims, the portion of the Schneller '245 patent that the Office Action designates as the membrane (16) is not positioned between the portions that the Office Action designates as the chamber (42) and second lumen (58), and there is no suggestion of an arrangement as recited in Applicant's claims.

### CONCLUSION

For the foregoing reasons, the Applicant respectfully requests reconsideration of this application. While no fees are believed to be due, the Office is authorized to charge any underpayment or credit any overpayment to Kenyon & Kenyon's Deposit Account No. 11-0600.

Respectfully submitted,

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